



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/728,297

12/04/2003

Timothy J. Cornish

1910-SPL

7924

7590

06/16/2004

Albert J. Fasulo, II, Office of Patent Counsel  
The Johns Hopkins University  
Applied Physics Laboratory  
Mail Stop 7-156, 11100 Johns Hopkins Road  
Laurel, MD 20723-6099

EXAMINER

RAEVIS, ROBERT R

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 06/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/728,297	<b>Applicant(s)</b> CORNISH ET AL.	
	<b>Examiner</b> Robert R. Raevis	<b>Art Unit</b> 2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) 10 and 13-20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-9, 11, 12, 21-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>12-4-03</u> . | 6) <input type="checkbox"/> Other: _____  |

**DETAILED ACTION**

Election of Group II is acknowledged. As the evidence claim 21 (ABbr) is rejected over art of record, the subcombination (Bsp) has been rejoined *only to the extent* that claims of the subcombination (Bsp) are no longer patentably distinct from the combination (Evidence claim ABbr, and ABsp). Claims 13-19 and 10 (Bsp) are patentably distinct from the examined combination claims as all of the limitations of the subcombination Bsp are not in the combination, and the subcombination can be used as a sampler within a building.

Claims 3,25,27-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As to claim 15, "the recessed surface" lacks antecedent basis.

As to claim 18, "the cutout regions" lack antecedent basis.

As to claim 3, the claim states that the analyzer is "coupled" to the "plate", yet base claim 1 states that the plate is "mounted" in the housing. These two situations cannot occur at the same time, as the plate must be removed to be "coupled" to the analyzer. Thus, claim 3 is not directed to a "system" that exists at any one moment in time.

As to claim 25, the claim states that the analyzer is "coupled" (line 2) to the "plate", yet base claim 1 states that the plate is "mounted" in the housing. These two situations cannot occur at the same time, as the plate must be removed to be "coupled"

Art Unit: 2856

to the analyzer. Thus, claim 3 is not directed to a "system" that exists at any one moment in time.

As to claim 27, "the disk" lacks antecedent basis.

As to claim 30, "the step of rotating" lacks antecedent basis.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,2,4-6,9,11,12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Burghoffer et al in view of Smith.

Burghoffer et al teach an aerosol sample system, comprising: housing 8; plurality passages 4; rotatable sample plate 1 that is removably mounted in the housing; and "pump" (col. 4, line 44) to draw material through the sampler.

Burghoffer does not refer to a vehicle, does not refer to ambient, and does not refer to concentric tracks of collection spots of aerosol.

As to claims 1,2,4-6,9,12, either Burghoffer's sampler is "attachable" to a vehicle because either (1) it is small and therefore capable of being attached, or (2) because it is known to transport items in vehicles in a secured fashion to assure that the item does not slide around and break during transport. Burghoffer's teaching of sampling "air" (col. 4, line 35) is suggestive of sampling from ambient. Finally, it would have been obvious to sample tracks to collect spots because Smith teaches (ABSTRACT) discrete

Art Unit: 2856

sampling with an impactor over periods of time to provide for measurements over different times.

As to claim 11, it is known to apply adhesive on impactor surfaces to aide in retaining particulates of interest.

Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Megerle in view of Jacobs et al, and further in view of Birmingham et al.

Megerle teaches a sample detection system, including: "unmanned" (col. 4, line 6) "aircraft" (col. 4, line 7) to deliver "biological warfare" sensors to a location of interest.

Megerle does not state that the "aircraft" is radio controlled, and does not refer to aerosol.

As to claim 21, it would have been obvious to remotely control Megerle's aircraft as Jacobs teaches locating "unmanned" (col. 2, line 4) aircraft to "target" (col. 1, line 35) locations, suggestive of radio controlled craft. It would have been obvious to sample aerosol as Birmingham teaches (claim 11) that "biological warfare" agents include aerosol components.

As to claim 22, it would have been obvious to locate a sample (probe) inlet along the longitudinal axis of the main body of the aircraft because the sampler need only draw sample from anywhere outside of the craft. In that alternative, it would have been obvious to draw sample from the middle of the bottom of the aircraft to provide for a sample flow that is directed exactly towards the probe. In addition, it is known that remote control aircraft include those that have multiple propellers, the propellers being an equidistance from the body of the plane.

Art Unit: 2856

Claims 23,24,25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Megerle in view of Jacobs et al, and further in view of Birmingham et al as applied against claim 21, and further in view of Burghoffer et al in view of Smith.

As to claims 23 and 24, it would have been obvious to employ Burghoffer's sampler in Megerle's aircraft because Burghoffer teaches that a multiple plate impactor to effectively sample particulates in air for subsequent analysis.

As to claim 25, it would have been obvious to employ an indexing procedure to analyze "discrete" (Smith, ABSTRACT) samples on Burghoffer's plate to relate each sample to each of the particular locations of interest.

Claims 26-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Megerle in view of Jacobs et al, and further in view of Birmingham et al, and further in view of Burghoffer et al in view of Smith.

As to claims 16,27, and 30, comments that exist above similarly apply here.

As to claims 28,29, it would have been obvious to employ an indexing procedure to analyze "discrete" (Smith, ABSTRACT) samples on Burghoffer's plate to relate each sample to each of the particular locations of interest.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Weimer et al sample with a helicopter. (See col. 3,line 30)


Williams et al employ a radio device. (See Figure 4)

Letarte et al employ a recess 104.

Art Unit: 2856

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert R. Raavis whose telephone number is 571-272-2204. The examiner can normally be reached on Monday to Friday from 7am to 4pm. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
RAEVIS